

**Forest Conservation Advisory Committee**  
**Comments on Bill 37-07: Forest Conservation Law**  
**September 15, 2008**

Introduction:

The Forest Conservation Advisory Committee (FCAC) was convened on April 3, 2008 and a Chair was appointed on June 24, 2008. At the time the FCAC was convened, Bill 37-07 and the Elrich Amendments had already been introduced and debated in the County Council for a few months.

In order that the FCAC's advice be as focused and relevant as possible, these comments focus solely on major provisions of Bill 37-07 and the Elrich Amendments and the areas where these proposed amendments differ. The FCAC based its discussions around the comparison chart found in the March 2008 T&E Committee packet, beginning on page circle 300.

For provisions where FCAC members reached consensus, we have noted that consensus. Consensus did not require approval of every Committee member, but rather the overwhelming majority of the members present at the meeting where the issue was discussed. For provisions where FCAC members could not reach consensus, we have explained the different positions.

A final vote provided FCAC members an opportunity to express their individual opinions on each of the positions described in this report. The vote was done via an anonymous online survey, the results of which are provided beginning on page 22 of this report.

We hope the Council will find these comments useful in its ongoing debate of Bill 37-07, the Elrich Amendments, and the existing Forest Conservation Law.

Respectfully,  
Members of the Forest Conservation Advisory Committee

## **FCAC Comments on the Major Provisions of Bill 37-07 and the Elrich Amendments**

<b>Issue</b>	<b>Current FCL</b>	<b>Bill 37-07</b>	<b>Elrich Amendments</b>
Definition of Forest	As currently written, consideration is given only to forested area occurring on individual property, even if forested area is part of a larger forest on adjacent properties. However, current implementation considers forested area beyond lot. [22A-3]	Same as written in current FCL. [Circle 4 Line 65]	Requires consideration of forest area “regardless of political or property boundaries.” [Circle 71 Lines 64 and 67]

**FCAC Comments:** The Committee has two major positions that are described below.

In support of Bill 37-07: The members of the Committee who support Bill 37-07 do so out of concerns about the potential for deleterious effects on landowners if property lines are NOT considered when defining a forest. These members are concerned that FCL requirements for a given property owner could be unfairly affected by earlier forest-clearing activities of other nearby property owners. In addition, these members believe that the current law’s silence on the issue of property lines allows discretion to be used by the Planning Department when applying the law.

In support of the Elrich Amendments: The Elrich amendments would mandate that forest areas be defined regardless of property lines. The members of the Committee who support the Elrich amendments do so out of concerns that if a grouping of trees is indeed a forest, it should be protected as such regardless of how many properties it spans or how much of it exists on any one property. If the law remains silent on the issue as Bill 37-07 proposes, the door would remain open for allowing property lines to dictate whether a forest is a forest. If property lines were used, it would exacerbate the effects of parcelization, a major threat to Montgomery County’s forests, and cause many fewer forests to be considered under the law. It is our understanding that the Planning Department’s current practice is to evaluate forests without regard to property boundaries. The Elrich amendments would simply codify this current practice, and close the door to using property lines as an arbitrary determinant of our forests.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Trigger for application of FCL	Tract of land must be 40,000 sq. ft. or greater for FCL to apply (except when activity would result in disturbance to champion tree, or forest in environmental buffer or special protection area). [22A-4(b), 22A-5(a)(2)(A), 22A-5(n)(2)(A), 22A-5(p)(2)]	Same as current FCL. [Circle 9 Lines 187, 194, 198, 202, 206, 221]	Mr. Elrich has indicated that he plans to alter his amendments on this issue so that they would be the same as current FCL.

**FCAC Comments:** The Committee understands that although Mr. Elrich originally proposed lowering the lot size threshold from 40,000 square feet (approximately 1 acre) to 10,000 square feet (approximately ¼ acre), he has since withdrawn this proposal. Consequently, neither Bill 37-07 nor the Elrich Amendments propose that lots less than 40,000 square feet be regulated under the FCL (with a few exceptions already provided for in the law).

The Committee reached consensus that retaining a 40,000 sq. ft. lot size trigger is acceptable; however members were split regarding their reasons for reaching this consensus.

Some members of the Committee actively support 40,000 sq. ft. as a reasonable threshold because they believe that this threshold will allow owners of smaller parcels to develop their properties without running into complicated FCL requirements, and that it will prevent the Planning Department staff from being overwhelmed with new applications. These members believe the FCL is not an appropriate law to address parcels smaller than 40,000 sq. ft.

Other members of the Committee are willing to accept a 40,000 sq. ft. threshold in recognition of the Planning Department staffing issues it raises, but emphasize that this lot size threshold leaves most trees and forests located on lots less than one acre without any protection under the law (although even some properties above 40,000 sq. ft. are exempt, and even forests on properties that do fall under the FCL do not all receive permanent protection via a conservation easement). These members believe that in conjunction with the variety of other exemptions available under the FCL, this regulatory “gap” leaves a significant portion of the County’s tree and forest cover without protection and/or mitigation requirements.

All members agree that the Council needs to consider other mechanisms in addition to the FCL to protect the County's tree and forest cover.

Accordingly, the Committee recommends that if the Council considers a separate "tree ordinance," it should look carefully at how the tree ordinance will protect small forests and/or individual trees that are not protected because of the FCL's 1-acre lot size threshold.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Clarification of the FCL using a Level 1/2/3 Review framework	N/A	Creates a Level 1/2/3 review process, with each level requiring a different intensity of scrutiny and mitigation requirements. No major substantive change from current FCL.	Same as Bill 37-07

**FCAC Comments:** The Committee reached a consensus that clarification of the FCL is critical, and that the proposed Level 1/2/3 Review framework is a helpful way to approach the issue. The current law describes the exemption process and associated compliance requirements in a manner that is chronically unclear and confusing to the regulated public. The proposed three levels of review incorporate the existing process in a form that provides a tiered and orderly process that more clearly indicates the varying degrees of review and criteria which might apply to a given level of proposed disturbance. The Committee supports this proposed revision.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Trigger for review by the Planning Department for recorded single lots	Activity requires Sediment Control Permit (disturbance equal to or greater than 5,000 sq. ft.). [22A-4]	Level 1 Review – Same as current FCL. [Circle 8 Lines 181-199]  Level 2 Review – Any house, addition or accessory	Level 1 Review – Adds to Bill 37-07 by including cutting of any forest in environmental buffers, special protection, etc. [Circle 75 Lines 160-184]

		structure (that does not result in the cutting or clearing of more than 40,000 sq. ft. of forest). <i>[Circle 9 Lines 200-234]</i>  Level 3 – Agricultural and forestry activities.	Level 2 Review – Any house, addition or accessory structure (that does not result in the cutting or clearing of more than 5,000 sq. ft. of forest) <i>[Circle 76 Lines 185-227]</i>  Level 3 – Agricultural and forestry activities.
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**FCAC Comments:** The Committee has two major positions that are described below.

In support of Bill 37-07: The members of the Committee who support the Bill 37-07 alternative do so in preference over the current law and the Elrich Amendments. Clarification was the primary and original intent of the Planning Department when they first proposed to improve the manner in which the law and regulations were administered and implemented. These members support the revision of this law in intent but do not necessarily support any associated changes in thresholds and triggering criteria, including the Elrich Amendment.

In support of Elrich Amendments\*: The Elrich Amendments require Level 1 Review—which generally triggers reforestation requirements—for two additional situations: when forest is disturbed in environmental buffers and special protection areas; and when more than 5,000 square feet of forest is disturbed on lots greater than 40,000 square feet (current law starts at 40,000 sq. ft. of disturbance).

The reduction of forest areas from 45% to 28% from 1973 to 2000<sup>1</sup> is a rate of loss that is unacceptable. While implementation of the original FCL helped slow the rate of loss somewhat, the law still allows most landowners to clear nearly an acre before requiring mitigation to offset the loss. The members of the Committee who support the Elrich amendments do so because they support measures to provide important additional protections not currently in the law. The current law only requires a Level 2 Review—which has no reforestation or permanent protection requirements for forest clearing less than 40,000 sq. ft. (almost an acre).

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<sup>1</sup> Montgomery County Forest Preservation Strategy, October 2000. Available online at <http://www.montgomerycountymd.gov/content/dep/forest/strategy.pdf>

These members feel strongly that 5,000 sq. ft. is an appropriate starting point for Level 1 Review and its associated mitigation requirements. Neither the existing FCL nor Bill 37-07 provides any additional significant mechanisms to slow the rate of forest loss. However they believe the Elrich amendments would make significant strides towards slowing forest loss by increasing the number of situations in which mitigation is required when forest is cleared. This will both help offset forest clearing and help deter forest loss, and thereby lessen the ecological and social impacts of forest loss and fragmentation.

In addition, this proposed change recognizes the need to protect forest in areas where streams, wetlands, steep slopes, and related natural features need special protection to protect the sensitive conditions of these natural features.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Land Use Types	Land Use Types are used to set forest conservation thresholds and afforestation requirements for different land uses and housing density. <i>[22A-12 (a) Table]</i>	Same as current FCL. <i>[Circle 38 Line 957]</i>	Adds two categories: Low Density Residential Area and Highway Rights-of-Way and School Sites. Removes one category: Institutional Development Area. <i>[Circle 86 Line 417]</i>

**FCAC Comments:** The Committee reached a consensus that a new “low density” land use category should be added and the existing “institutional” category should be removed, as proposed by the Elrich Amendments. The Committee also reached a consensus that, contrary to the Elrich amendments, school sites should not be treated as a separate category with lower requirements but should instead conform to the underlying zoning’s requirements. The Committee did not reach a consensus as to what the reforestation / afforestation thresholds should be for a new ‘low density’ category, but makes several suggestions below.

The Committee believes that removing the existing “institutional” category and not providing special treatment for school sites is desirable for two reasons. First, it is fundamentally fair. Schools and institutions should be subject to the same forest conservation rules as any other use in the County. Second, treating these uses equally with other uses sends the message that the County is willing to lead by example, and is

not interested in providing itself exemptions from the rules that it requires private citizens to follow.

The Committee concluded that adding a low density category is desirable to two reasons. First, it allows the County to maximize forest conservation in the available space. Lots that would be categorized as 'low density' have more room to provide forest conservation, and the FCL should reflect that. Second, a low density category is justified by conformance with the zoning categories Montgomery County already uses.

Separating Low Density Residential areas from Medium Density Residential areas is more in keeping with existing zoning in Montgomery County. There is a substantial enough difference between the two to warrant such a separation. A Low Density Residential category generally encompasses the 2 residential 'green wedges' that buffer the Agricultural Reserve and protect either public water supplies (the Potomac River) or high quality streams (such as Paint Branch) from the more urban down county. Within these 'green wedges' some medium density development exists but since low density consists primarily of lots between 40,000 sq ft and 5 acre as well as Rural Cluster, there is a greater possibility for preserving and creating forest where properties of a size more likely to be fall under the FCL exist. These properties are also more likely to be outside the sewer envelope and therefore on well and/or septic.

The FCAC discussed a range of possible conservation and afforestation thresholds for the Low Density category. These are provided below, along with the number of members who support each:

	Conservation Threshold	Afforestation Requirement	Number of Committee members who favor this option*
Option #1 – Elrich Low Density conservation threshold + Bill 37-07 Medium Density afforestation requirement	40%	25%	6
Option #2 – Elrich Low Density conservation thresholds	40%	20%	3
Option #3 – Other potential compromise position	Other	Other	5

*\*7 of the 20 Committee members did not register an opinion: two abstained, three did not vote.*

Note: Both the existing FCL and Bill 37-07 use a Medium Density category only. Existing conservation thresholds /afforestation requirements are 30% / 20%. Bill 37-07 would change those to 30% / 25%.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Conservation Thresholds	Mitigation is required for all forest removed from a tract of land greater than 40,000 sq. ft. For forest removed above the applicable threshold, mitigation at a certain rate is required. For additional removal of forest below the threshold, more extensive mitigation is required. [22A-12(a) Table]	Increases conservation thresholds by 5% except in Agricultural and Resource Areas. [Circle 38 Line 957]	Same as Bill 37-07. [Circle 86 Line 417]

**FCAC Comments:** The Committee has two major positions that are described below.

In support of Bill 37-07 and the Elrich Amendment<sup>†</sup>: The members of the Committee who support Bill 37-07 and the Elrich Amendment believe that Montgomery County needs strong conservation thresholds. This is both because of the urgent need to slow forest loss, and because of the many benefits of trees in contributing to air and water quality, erosion and runoff control, and combating the negative effects of global warming.

Consequently, these members advise the County Council to increase the thresholds in the FCL amendments and even consider going beyond the proposed threshold increases to make the FCL a stronger tool for protecting forests and ameliorating climate change.

In addition, these members believe that the arguments made in support of the current thresholds (see below) are misleading.

- First, the analysis of data mentioned below regarding forest retention/replanting apply only for properties that are both covered by the FCL *and* trigger mitigation requirements. They do not include the tremendous amount of forest loss on properties that qualify for one of the myriad of existing FCL exemptions. Nor do they include forest loss on properties where large amounts of forest are being cleared (e.g. up to 40,000 sq ft—almost an acre), but no mitigation is required under the FCL. Even if these calculations are correct, this means we are still losing almost 10% of our total forest (even including mitigation) on properties where the FCL requires mitigation, in addition to unknown amounts of forest on all the properties where mitigation is not required or the law doesn't apply.

- Second, the analysis relies in large part on reforestation projects (over 20% of the forest identified as “retained or reforested” is immature plantings<sup>2</sup>). Newly replanted forests do not provide nearly the environmental benefits that existing forests do. For the first five years a newly planted forest buffer performs pollution control at a standard equal to that of grass.<sup>3</sup> Offsite forest plantings may encourage the migration of forest up-county, and leave the area being developed without the many benefits of forest cover. On- or off-site, there is a significant risk that newly planted trees will never reach the status of a mature forest.<sup>4</sup>
- Finally, the FCL applies to an increasingly limited set of properties, meaning that there is a substantial amount of forest cover the law does not protect, so we must work to maximize forest protection in the FCL in order to compensate for unregulated loss on exempt properties.

In support of the existing FCL<sup>†</sup>: The members of the Committee who do not support the Bill 37-07 or the Elrich Amendments to change to the conservation thresholds instead prefer leaving the law in its current state. There are several reasons for this:

First, these members believe the current law is working. These members’ analysis of data provided by the Planning Department for the 15 year period the law has been in effect indicates that the existing forest conservation thresholds are working to provide the maximum amount of forest retention while allowing the clearing of lower-priority forests. When these lower priority forests are cleared, mitigation results in the reforestation and enhancement of priority stream buffer areas (Planning Department data indicate that on sites that trigger reforestation requirements, 93% of existing forest cover has been retained or reforested over the 15-year period)<sup>5</sup>. The current thresholds strike this delicate balance while still allowing the property to be developed under the zoning it was granted and in accordance with the community’s Master Plan vision.

Second, these members conclude that it is unfair to pass new thresholds that will negatively affect only a few projects. Approximately 28,100 residential units (5,508 single family detached homes, 4747 townhouses and 17,845 multifamily units) already approved but not yet built will not be subject to any changes to the Forest Conservation

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<sup>2</sup> Of the forest identified as “retained or replanted” in the position statement below supporting the existing FCL thresholds, 21% is new plantings. Calculated based on data provided by Parks and Planning in its “15- Year Forest Conservation Activity in Montgomery County”, MNCPPC, July 2008. Calculation made by FCAC member and not verified by The Planning Department.

<sup>3</sup> Todd, A. 2002. Nutrient Load Removal Efficiencies for Riparian Buffers and Wetland Restoration. USDA Forest Service, Northeastern Area, State and Private Forestry, Annapolis, MD.

<sup>4</sup> *Id.*; “If you were able to convert unites of benefit whether numbers of nitrogen, or soil protection, or habitat, it would take a long time for the new forest to achieve a level of service provision equal to the mature forest...while also incurring the added risk that those services may not ever be matched (due to failure rates, etc.).” September 5, 2008 E-mail from Albert Todd, USDA Forest Service, Ecosystems Services, to Anne Merwin, FCAC Chair. In addition, the law and regulations state that a “successful” reforestation is 100 live trees per acre, but only define “live” as a tree with 2 normal size leaves.

<sup>5</sup> 93% statistic calculated based on data provided by Parks and Planning in its “15- Year Forest Conservation Activity in Montgomery County”, MNCPPC, July 2008. Calculation made by FCAC member and not verified by The Planning Department.

Law.<sup>6</sup> Those few projects that will be affected by a new law with higher thresholds will be unfairly impacted by being the last ones to be developed.

Third, these members believe much of the development that will take place in this county in the coming decades will be infill and redevelopment.<sup>7</sup> They believe that, in cases where mitigation is required by the FCL, these projects would provide a net gain in forest cover since they would be providing off site forest planting.

Fourth, these members argue that increasing the thresholds is without peer-reviewed scientific basis and could adversely impact the ability to achieve other desirable community policies. They further argue that there is no logical reason provided thus far that would warrant a radical change to a law that has been in place for 15 years and has proven that it is meeting its intended purpose.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Reforestation Ratios: General	When forest is cleared above the threshold, the requirement is 1/4 acre established for every 1 acre removed. When forest is cleared below the threshold, the requirement is 2 acres established for every 1 acre removed. [22A-4 Definition of Forest Conservation Threshold, 22A-12(c)(1-2), and 22A-12(e)(2)(B)]	Same as current FCL. [Circles 39-40 Lines 989-998 and Circle 42 Line 1072]	When forest is cleared above the threshold, the requirement is 1/2 acre established for every 1 acre removed. When forest is cleared below the threshold, the requirement is the same as Bill 37-07 (2 acres established for every 1 acre removed). [Circle 72 Line 79, Circle 87 Lines 431-440, Circle 89 Line 468]
Reforestation Ratios: Mitigation Banking Ratio	When mitigation occurs off-site in existing forest, the requirement is 2 acres for every 1	Same as current FCL. [Circles 39-40 Lines 989-998 and Circle 42 Line	When mitigation occurs off-site in existing forest, the requirement is 4 acres for every 1

<sup>6</sup> “Pipeline of Approved Residential Development”, MNCPPC, May 15, 2008; Supplemented with data provided by Mark Pfefferle at the Planning Department.

<sup>7</sup> “Analysis of the Supply and Demand for Housing, Montgomery County, Maryland, June 26, 2008, Pages 2-3

	acre of reforestation needed. [22A-4 Definition of Forest Conservation Threshold, 22A-12(c)(1-2), and 22A-12(e)(2)(B)]	1072]	acre of reforestation needed. [Circle 72 Line 79, Circle 87 Lines 431-440, Circle 89 Line 468]
Fee-in-lieu Rate	The fee-in-lieu rate is set at \$0.90 per sq. ft. This is the estimated cost of purchasing plant material, installing plant material, mulching and watering, controlling invasive plant species, reducing damage from white-tailed deer browsing, surveying for survival, and replacing dead plants.	Does not address the issue b/c fee-in-lieu rate is not set in the FCL. Would not change the current rate of \$0.90 per sq. ft.	By a separate resolution, increases the fee-in-lieu to \$2.00 per sq. ft. and retains existing mechanism to increase the fee by the percentage amount of the annual average change in the Consumer Price Index. [Circle 99]

**FCAC Comments:** The Committee has combined these issues in our analysis because we believe they raise essentially the same policy issues, and are inextricably linked in that changing one ratio/rate requires changing them all in order to maintain parity as in the current protection/mitigation system. The Committee generally agrees that the current order of priorities (i.e. on-site preservation, then on-site forestation, then off-site reforestation, etc.) should be maintained. The Committee has two major positions on whether increasing the cost of reforestation options in order to incentivize on-site conservation of existing forest is desirable that are described below.

In support of Bill 37-07<sup>s</sup>: As noted above, the reforestation ratios, mitigation banking ratio, and fee-in-lieu rate all work in tandem, and have a cumulative impact on any regulated property, and should be looked at in their totality. Also note that the reforestation thresholds and land use category issues discussed elsewhere in this report are also linked and should be considered in context with the issues discussed here. Changing any one of these mechanisms will have a singular impact on a regulated property. Changing all of them will have a cumulative impact that can only be seen when applying all of the proposed changes to real examples (see below).

The members of the Committee who support Bill 37-07 believe that the changes proposed in the Elrich amendments are overly burdensome on property owners and could cause an unreasonable increase in cost, a substantial loss in property value, and could have other unintended consequences, such as increased housing costs, reduced density at transportation nodes, increased costs for single lot owners, and a reduction in our ability to meet the housing demand in the county. Specifically:

- The members of the Committee who support this position believe that increasing the thresholds and ratios would result in excessive cost impact to property owners, large and small.
- Leaving intact the current mitigation banking ratios would maintain an adequate incentive to farmers in their ability to provide forest banking on their properties. In addition, the members who support this position believe the reforestation banks would run out too fast if the ratio is increased as proposed, and that raising the banking ratio from 2:1 to 4:1 will have the impact of devaluing forest banks. A 5 acre bank currently counts toward 2.5 acres of off-site forest mitigation. Under the proposed amendment, it would only count toward 1.25 acres of forest mitigation, making it less valuable in these members' opinion.
- These members believe that retaining the current the fee-in-lieu of \$.90 per square foot of mitigation is appropriate because this option only applies to a limited number of projects. Currently only projects that are under 5 acres in size or have a planting requirement of less than ½ acre can qualify to pay the fee. All other projects must plant the required mitigation. In addition, these members believe that keeping the fee at this level maintains proportionality with the actual cost of forest planting in Montgomery County which they believe is presently in line with the \$.90 fee amount. Currently, MNCPPC has a five acre planting project that costs slightly more than \$100,000, which is approximately \$.45 per square foot for installation of plant material. According to MNCPPC staff, the actual cost would be closer to \$.90 if they had to acquire the land and pay for maintenance of the planting area, direct costs that they avoid since they own the land already and they can use their staff for some maintenance. These members believe current fees also would avoid adding excessive cost for both large and small property owners who could be dealing with increased mitigation requirements due to other parts of Bill 37-07 and/or the Elrich Amendments.

The members of the Committee who support Bill 37-07 believe the seven examples that were provided previously to the Planning Board by staff regarding the comparative costs of the current FCL, Bill 37-07, and Elrich amendments<sup>8</sup> are most illustrative of these issues. These examples in their entirety can be found in the September 17, 2007 Staff Report to the Council's T&E Committee. These members believe the examples indicate that the Elrich amendments would result in unreasonably large increases in replanting requirements and fee-in-lieu costs, in addition to other related costs like loss of lots. In the appendix of this report is a summary of the seven projects with added considerations prepared by the members of the Committee who support this position.

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<sup>8</sup> Example Projects prepared by MNCPPC for the September 17, 2007 Staff Report.

In support of Elrich Amendments: In general, the members of the Committee who support the Elrich amendments do so because they believe that Montgomery County should create stronger incentives to maximize on-site forest retention during the development/redevelopment process. While they realize that the FCL is not (nor should it be) the only tool the County can use for tree protection, it is a critical tool and currently our best opportunity to save existing trees and forests in the face of ever-increasing threats from development.

Accordingly, these members' perspective on the topics of increasing reforestation ratios and fee-in-lieu charges is that increasing these is a market-driven, efficient way to (1) incentivize retention of existing on-site forests, (2) to better reflect the lesser environmental benefits provided by replanted forests, and (3) to maintain the benefits of forests on site rather than relocate them to areas where the need may be less. Existing forests provide significantly more value than replanted forests.<sup>9</sup> Water quality and stream health are directly related to the total canopy cover of the watershed overall.<sup>10</sup> Thus, while forested streamside areas provide a vital "last line of defense" for water quality, watersheds with more overall forest cover are healthier than those with lower overall forest cover.<sup>11</sup>

Furthermore, these members believe increasing reforestation ratios is an excellent way to incentivize more valuable on-site conservation over easier (and currently cheaper) replanting. The Energy and Air Quality Advisory Committee concurs on this issue, stating "if the County is serious about improving its local climate... then it must focus on maintaining as much existing forest as possible... Replanting is rarely successful, is very expensive, and uses many resources."<sup>12</sup>

These members believe preserving existing forest can also provide financial benefits for developers and homeowners. Builders in Maryland noted a 10-15% premium for a lot with trees, and property values in California had a 17% increase in value for property

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<sup>9</sup> "For the first five years a new forest buffer performs [pollution control] at a standard equal to that of grass." Todd 2002, *supra* note 2. "If you were able to convert unites of benefit whether numbers of nitrogen, or soil protection, or habitat, it would take a long time for the new forest to achieve a level of service provision equal to the mature forest...while also incurring the added risk that those services may not ever be matched (due to failure rates, etc.)." E-mail from Albert Todd, *supra* note 3.

<sup>10</sup> For example, in the Mid-Atlantic, a watershed with 50% tree cover will have a stream health ranking of "excellent", while a watershed with only 30% tree cover will have a stream health ranking of "poor." Scott Goetz, et al. "IKONOS imagery for resource management: Tree cover, impervious surfaces, and riparian buffer analyses in the mid-Atlantic region." *Remote Sensing of Environment* 88 (2003): 195-208.

<sup>11</sup> *Id.* See also generally *Forests for the Bay*, Environmental Law Institute 2000; and *The State of Chesapeake Forests*, The Conservation Fund 2006.

<sup>12</sup> See Page 1 of the July 15-08 FCL commentary to the County Council of the Energy and Air Quality Advisory Committee. The full quotation reads: "An important consideration is that trees and forests are not "quick fixes", and that it is far easier to lose forests than replace them. Experience with re-afforestation efforts in Montgomery County has not been positive. Therefore, if the County is serious about improving its local climate and decreasing its impact on climate change, then it must focus on maintaining as much existing forest as possible, and regaining segments of forest lost to this point. Replanting is rarely successful, is very expensive, and uses many resources. In addition, the benefits of trees and forests are difficult to overstate..."

with trees.<sup>13</sup> Expensive stormwater management and erosion and sediment control requirements decrease as the amount of on-site forest preservation increases. In many neighborhoods without storm drains, forest and canopy cover are the only stormwater management.

In addition, there are practical problems with reforestation that argue in favor of strongly incentivizing retention of existing forest: (1) It is not easy to identify appropriate sites for reforestation; and (2) these members believe the County does not (and likely cannot) provide sufficient oversight and maintenance to ensure that reforestation plantings are successful and likely to grow into healthy forests. Additional challenges to reforested plantings maturing into healthy forests include deer browse and competition from invasive species.

Finally, with regards to the fee-in-lieu resolution in particular, raising the fee-in-lieu is a pragmatic recognition of how the economy has changed since the prior fee-in-lieu rate (of \$0.90 per sq. ft.) was set. Similarly, tying future increases in the fee-in-lieu to normal and expected continuing changes in the Consumer Price Index is a practical way to continue to recognize that economies change and to avoid unnecessary, repetitive legislation to keep the fee properly adjusted to current costs.

In addition, these members believe that it is misleading to suggest that MNCPPC planting costs (which fee-in-lieu covers) are cheaper than a raised fee would justify. These members believe that simply looking at direct spending by MNCPPC ignores the many other costs actually incurred as part of planting projects. While park staff can do some mowing in areas accessible to large mowers, in areas with limited access for large equipment MNCPPC contracts out mowing and herbicidal spraying. In addition, some invasive species control on planting sites is maintained by volunteers, whose time is not included in direct costs figures cited above. These members also believe that any land provided by MNCPPC for planting should be included in planting cost calculations.

<b>Issue</b>	<b>Current FCL</b>	<b>Bill 37-07</b>	<b>Elrich Amendments</b>
Preferred Sequence for Mitigation	Consistent with State FCA giving highest priority to enhancement of existing forest through on-site selective clearing, supplemental planting or both, then on-site reforestation or afforestation. [22A-12(e)(1)(A)]	Changes preference sequence to on-site reforestation or afforestation, then off-site reforestation or afforestation, followed by non-native and invasive management	Same as Bill 37-07.

<sup>13</sup> Riparian Forest Buffer Panel Report: Technical Support Document, Chesapeake Bay Program, 1996.

		control with supplemental planting. <i>[Circle 41 Line 1030]</i>	
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**FCAC Comments:** The Committee reached a consensus that enhancement of existing forests should remain a mitigation option, as it currently is in the existing FCL. We oppose the removal of forest enhancement as a mitigation option, as both Bill 37-07 and the Elrich Amendments propose to do. It is our understanding that the removal of this provision was not founded on any scientific or ecological basis, but rather as “code clean up” since the provision is currently rarely used. The Committee feels that instead of removing a potentially useful but rarely used mitigation option, the County should leave the option in the law and develop ways to encourage its use in appropriate cases.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Maintenance Period Following Planting	Following planting, 2 years of maintenance is required to ensure forest establishment, or sufficient numbers of thriving trees. <i>[22A-12(h)]</i>	Increases all maintenance periods to 5 years. <i>[Circle 46 Line 1182]</i>	Same as Bill 37-07. <i>[Circle 89 Line 477]</i>

**FCAC Comments:** The Committee has two major positions that are described below.

In support of Bill 37-07 and the Elrich Amendment: The members of the Committee who support increasing the current two-year maintenance and bonding period to five years see this as essential to strengthening our existing forestry law because it allows more time for new plantings to become established and functional forests. As noted above, successfully establishing new plantings is a challenge in any situation.

These members believe that failure rates for plantings are very high due to factors such as deer browse, competition from non-native species, droughty conditions, and poor or nonexistent maintenance. Current regulations defining what a “successful” planting is make actual growth into healthy, functioning forests far from a guarantee.<sup>14</sup> In addition, the Planning Department can only extend the maintenance and management period if less

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<sup>14</sup> See *supra* note 3. The law and regulations state that a “successful” reforestation is 100 live trees per acre capable of reaching 2 inches DBH in 7 years, but only define “live” as a tree with 2 normal size leaves that has lost its cotyledons (essentially, pre-leaves). So a very small maple, for example 6 inches tall with 3 leaves, would likely be counted as successfully replanted. This is in no way a guarantee that the replanted trees will become dominant and form a mature forest, especially given the challenges of deer browse and invasive species.

than 50% of the plantings have survived (again noting that even plantings deemed to have successfully survived need only have two leaves).<sup>15</sup> In all other instances the performance bond must be released. For example, if 51% of the trees survive and the applicant then does some last-minute planting to make up for some of the non-surviving trees, the Planning Department is obligated to released the performance bond without any more maintenance required, despite the history of high plant mortality.

The result has been unsuccessful efforts to replace lost forest cover with poorly established plantings. Therefore these members believe the extended bond and maintenance period is critical as a measure to ensure sufficient time and follow-through on planting maintenance requirements, and to increase the chances of newly planted trees' becoming healthy and functioning forest.

In support of the existing FCL: The members of the Committee who oppose increasing the maintenance and bonding period from 2 to 5 years do so because they believe it is unnecessary and penalizes efforts to achieve successful forest plantings within the current 2 year time frame. These members believe that when installed and maintained properly the success of a planted forest can be determined within 2 growing seasons.<sup>16</sup> In those instances where there is high plant mortality due to poor plant selection or management, the Planning Department already has the authority to hold bonds and extend the maintenance period indefinitely until forest plantings are acceptable. These members believe plant mortality can be addressed with greater success by changing regulations rather than changing law. For example, the regulations might require inspections and maintenance during the current 2 year time period. These members conclude that the effect would be to eliminate any ineffective maintenance practices during those 2 years and provide greater certainty that plantings will be acceptable at the end of the 2 year period. The regulations might require different thresholds for survivability and the use of best management practices. We believe that a regulatory approach would be more successful and less expensive. The cost of the proposed amendment must be noted. An increase in the maintenance period from 2 to 5 years is a time increase of 150%. These members believe it would require a substantial increase in bond premiums and in inspection costs that will add to the already burdensome cost of regulation borne by homeowners in Montgomery County and make housing in the county less affordable unnecessarily.

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<sup>15</sup> Section 108.E.(3) footnote (c).

<sup>16</sup> The American Standard for Nursery Stock (ANSI Z60.1 – 2004) recognizes two (2) growing seasons as the timeframe – with appropriate maintenance, etc – that a transplanted tree can be successfully reestablished.

Issue	Current FCL	Bill 37-07	Elrich Amendments
County Arborist roles and responsibilities	Provides for a limited role of the County Arborist / DEP in application and review of FCL	Deletes County Arborist section from the FCL; Would not change current relationship between DEP and Planning Department	Generally gives the County Arborist and DEP more oversight over application of the FCL

**FCAC Comments:** The Committee reached consensus that it would be helpful to provide DEP with additional oversight of the FCL, but also agreed that a time limit should be established for a DEP review so that this additional agency involvement does not present a barrier to progress on project approvals.

Overall, the Committee is in agreement that there must be better coordination among DEP and the Planning Department on the Forest Conservation Law. The County Arborist, a position created by the FCL, is located within DEP and DEP is responsible for forest conservation in the county. However, the Planning Department is currently given a larger role in implementation of the FCL. Additional oversight by DEP and the County Arborist would enhance implementation of the FCL and give the public more confidence that forest conservation and the environment are considered when development projects are under review. However, an appropriate time limit (perhaps 30 days) should be established to prevent this additional oversight from creating unnecessary delays in the development review process. While the Committee does not take a position on specific duties of the County Arborist, we see a need for clarification of the title “County Arborist” to “Forest Conservation Coordinator.” The Committee is also in agreement that the County Council needs to think through the mechanics carefully before finalizing legislation redefining the role of the County Arborist, and that additional staffing requirement at DEP should also be taken into consideration.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Champion Trees: List	The definition of “champion tree” remains dependent on a list of trees maintained by the Montgomery County Forest Conservancy District Board – a voluntary program within a voluntary	Same as current FCL. <i>[Circle 3 Line 44]</i>	Cites the list developed by the Forestry Board but requires that the County Arborist maintain the list. <i>[Circle 70 Line 32]</i>

	board. <i>[Expedited Bill 45-06 Line 5]</i>		
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**FCAC Comments:** The Committee reached a consensus that it would be helpful to provide better public information regarding the Forest Conservancy District Board's (Forestry Board) Champion Tree Register. In order that the public have greater access to the information contained in the register, which is currently only published every two years, the Committee agreed that the register be duplicated in a database and the database kept current by the County Arborist.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Champion Trees: Definition	The definition of "champion tree" includes non-native invasive tree species. <i>[Expedited Bill 45-06 Line 5]</i>	Modifies existing definition to one that would be approved by DNR. <i>[Circle 3 Line 44]</i>	Same as current FCL. <i>[Circle 70 Line 32]</i>

**FCAC Comments:** The Committee reached a consensus, contrary to the existing FCL, Bill 37-07 and the proposed Elrich Amendments, that non-native invasive tree species should not be protected as Champion Trees. We reached this conclusion for several reasons. Non-native invasive plants grow and spread quickly to cover large areas. They are growing in an environment in which they did not evolve so they are not subject to the many various natural controls present in their native environment such as pathogens, herbivores, or parasites. Such natural controls would limit their growth and spread in their natural environment. Non-native invasive plants often out-compete the native plants for water, light and nutrients in an ecosystem, crowding them out until they are at best a minority component of the ecosystem. They can disturb relationships between native insects and native plant species such as seed dispersal and pollination. They can hybridize native plant species. Non-native invasive plant species can inflict environmental, cultural, ecological, and economic damage and should not be protected under the Forest Conservation Law.<sup>17</sup>

Issue	Current FCL	Bill 37-07	Elrich Amendments
Priority areas	References "priority forests" and "priority planting areas," placing higher intrinsic value on	Removes several but not all references to priority areas. <i>[Circle 31 Line</i>	Same as Bill 37-07.

<sup>17</sup> Source: Non-native Invasive Plants. Carole Bergmann. Retrieved from <http://www.montgomerycountymd.gov/content/dep/invasives/invaders.pdf> on July 23, 2008.

	them. [22A-11(a)(2)(B), 22A-12(b)(2), 22A-12(e)(3), 22A-12(g)(2)(C-E), 22A-13(e), 22A-27(a)]	794, Circle 39 Line 978, Circle 43 Line 1080, Circle 49 Line 1258, Circle 61 Line 1573]	
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**FCAC Comments:** The Committee reached a consensus in support of the Bill 37-07/Elrich Amendment proposal to remove some, if not all, references to “priority areas” from the code, and instead place the “priority area” provisions in the FCL regulations. We believe this is a logical change and will provide the flexibility needed to best implement this part of the law.

Issue	Current FCL	Bill 37-07	Elrich Amendments
Legal Standing to Residents	No provisions in current FCL.	Same as current FCL.	Gives Montgomery County residents or organizations legal standing to appeal decisions based on materially false, misleading, inaccurate, or incomplete information. [Circle 93, Line 570]

**FCAC Comments:** While members of the Committee disagreed over the desirability of providing legal standing to Montgomery County residents, the Committee ultimately decided it did not feel well-enough informed on the legal ramifications of this provision to take a formal position. Since this provision raises a variety of important legal issues, we encourage the County Council to carefully examine those legal issues and retain experienced legal counsel to provide advice. In addition, we believe the County Council should take into account the following issues and questions as part of its deliberations:

- Are there other local, state, or national jurisdictions that have granted similar citizen standing for this type of issue?
- Does the proposed citizen standing conflict with state law?
- Some Committee members are concerned that citizen standing will encourage frivolous law suits. Consequently, the Committee recommends that if citizen standing is granted, the Counsel consider including the following to limit the potential for frivolous lawsuits:

- Penalty provisions for suits that are determined to be frivolous by the court (e.g. complainant must pay defendant’s legal costs)
- Provision placing a maximum time limit on when complaints may be filed.
- Any complainant must have their claims substantiated by a qualified professional in order for the complaint to be valid.
- Is there potential for the standing provision to be used negatively in disagreements between neighbors?

Issue	Current FCL	Bill 37-07	Elrich Amendments
Advanced Notice	No provisions in current FCL.	Same as current FCL.	Requires advanced notice in writing, at least 10 days prior to any forest cutting, clearing, or grading activity to the Planning Director and residents of adjoining properties. <i>[Circle 92, Line 545]</i>

**FCAC Comments:** The Committee reached a consensus that a notice requirement is desirable and would benefit both the notice-giver and the notice-recipient(s). However, we feel that the details of how notice is provided deserve additional consideration by the County Council. Accordingly, we urge the County Council to consider the following issues:

- The success and practicality of the two available notice methods—posting vs. individual written notice—depend on the particular situation. In some situations posting is more effective and efficient, and in other cases individual written notice (as provided for in the Elrich amendments) is more desirable. Some Committee members felt that providing an “either/or” option for notification would allow the landowner to choose the most effective notice method for their particular case.
- The County Council should include a time window to ensure that notice is not provided too far in advance of or too close to the time of the proposed cutting, clearing, or grading— e.g. no more than 60 days and no less than 10 days prior to the activity. The Elrich amendments only include a minimum advance notice timeline, leaving open the possibility that notice could be provided years in advance of the actual clearing. The Committee’s proposed change would help avoid multi-year intervals between approval and actual start of site work.

- If posting is required, the County Council should clarify who would determine size and specs for the required signs.
- If individual written notice is required, the County Council should ensure direction is provided regarding how notice should be provided if the adjoining property is a multi-family dwelling.
- The County Council should also note that the proposed notice provision and the proposed standing provision are linked, in that failure to provide notice would trigger standing for the party to whom notice was not provided.

**The Committee discussed but is not taking a position on the following issues:**

- Afforestation requirements. Bill 37-07 and the Elrich Amendments differ only slightly in their afforestation percentage requirements, with Elrich proposing 20% for medium density residential areas, and Bill 37-07 proposing 25% for this same category. It is our understanding that the difference resulted from efforts to be consistent with other proposed changes, rather than a substantive disagreement about this particular category. We expect that the Planning Department and Mr. Elrich will be able to resolve this difference, and are therefore not taking a position.
- Agricultural activities. Concern was expressed about agricultural activities falling under a Level 3 review, as opposed to enjoying the exemption status granted under the current FCL and consistent with state law, which does not apply the FCL to agricultural activities. It is our understanding that this concern is being resolved and that the agricultural community is satisfied with the way it is being addressed. We presume that the agricultural community and County Council will be able to work out a mutually agreeable solution, and are therefore not taking a position on the agricultural issues in the bill. Should this change, the Committee would be willing to provide additional input on the issue.
- Creation of a Champion Tree “Class.” During its discussions of this issue, FCAC members raised several questions regarding the practical effects of the Elrich Amendments’ definition of a champion tree “class.” As a result, Mr. Elrich has decided to re-evaluate his proposed definition in order to address the Committee’s concerns. Accordingly, the Committee is not taking a position on the originally-proposed definition.

## Committee Survey Responses

As noted in the introduction to this report, a final vote was taken in order to give FCAC members an opportunity to express their individual opinions on each of the positions described in this report. The vote was done via an anonymous online survey. Seventeen of the Committee's twenty members responded to the survey. The responses to the survey are provided below.

Issue		I strongly support this position	I generally support this position, but I'm open to compromises, changes, or have concerns	I do not feel strongly either way	I generally oppose this position, but I'm open to compromises, changes, or have concerns	I strongly oppose this position	Abstain	Did not vote
<b>Definition of Forest</b> (Pg. 2)	Position in support of Bill 37-07	7	1	0	0	7	2	3
	Position in support of Elrich Amendments	7	0	0	2	6	2	3
<b>Trigger for application of FCL</b> (Pg. 3)	Consensus position	8	3	0	1	3	2	3
<b>Clarification of the FCL using a Level 1/2/3 Review framework</b> (Pg. 4)	Consensus position	10	4	0	0	1	2	3
<b>Trigger for review by the Planning Department for recorded single lots</b> (Pg. 4-6)	Position in support of Bill 37-07	6	1	0	2	6	2	3
	Position in support of Elrich Amendments	7	2	0	0	6	2	3
<b>Land Use Types</b> (Pg. 6-7)	Consensus position <i>(Survey results regarding what Committee members believe would be appropriate thresholds are provided in the body of the report)</i>	10	2	0	0	3	2	3
<b>Conservation Thresholds</b> (Pg. 8-10)	Position in support of Bill 37-07 and the Elrich Amendments	8	1	1	2	3	2	3
	Position in support of the current FCL	4	2	1	0	8	2	3

## Committee Survey Responses, Cont...

Issue		I strongly support this position	I generally support this position, but I'm open to compromises, changes, or have concerns	I do not feel strongly either way	I generally oppose this position, but I'm open to compromises, changes, or have concerns	I strongly oppose this position	Abstain	Did not vote
<b>Mitigation (Reforestation) Ratios and Fee-in-lieu Rate</b> (Pg.10-14)	Position in support of Bill 37-07	8	0	0	0	7	2	3
	Position in support of Elrich Amendments	7	0	0	0	8	2	3
<b>Preferred Sequence for Mitigation</b> (Pg. 14-15)	Consensus position	11	2	1	0	1	2	3
<b>Maintenance Period Following Planting</b> (Pg.15-16)	Position in support of Bill 37-07 and the Elrich Amendments	8	0	0	1	6	2	3
	Position in support of the current FCL	6	1	0	0	8	2	3
<b>County Arborist roles and responsibilities</b> (Pg. 17)	Consensus position	9	2	0	1	3	2	3
<b>Champion Trees: List</b> (Pg. 17-18)	Consensus position	11	2	2	0	0	2	3
<b>Champion Trees: Definition</b> (Pg. 18)	Consensus position	12	2	0	0	1	2	3
<b>Priority areas</b> (Pg. 18-19)	Consensus position	9	3	1	2	0	2	3
<b>Legal Standing to Residents</b> (Pg. 19-20)	Consensus position	6	4	1	1	3	2	3
<b>Advanced Notice</b> (Pg. 20-21)	Consensus position	10	3	0	1	1	2	3

**Appendix:  
Extended position statements**

This report was compiled from position statements drafted by members of the Forest Conservation Advisory Committee that reflect the discussions held by the entire Committee. In certain cases, the member responsible for drafting a specific position statement provided significantly more information and explanation than could be included in the main body of this report. In these cases, the Committee has summarized the key points in the main body of the report, but included the full position statement, as drafted by the member, here for purposes of additional reference only.

**\* Trigger for review by Planning Department: Extended position statement in support of the Elrich Amendments.**

The Elrich Amendments require a Level 1 Review by the Forest Conservation Law to be triggered when any of the following apply:

- (1) an activity will remove forest measuring 5,000 square feet or greater on a lot 40,000\* square feet or greater.

Councilmember Elrich believes 5,000 square feet, or half the minimum size of a forest as defined by the existing FCL and Maryland state law, is an appropriate starting measurement for potential forest loss to be used in this law.

Those members of the Committee who support the Elrich amendments believe the reduction of natural forest areas from 45% to 28% from 1973 to 2000 (Montgomery County Forest Preservation Strategy, October 2000) is a rate of loss that is unacceptable. Society is dependent on forests to clean the air and water. Research shows that global warming is partially due to loss of natural areas. Montgomery County's Green Infrastructure Plan cites the ecological and social impacts of natural area reduction and fragmentation—including isolation of plant and animal communities, increased exotic/invasive species, loss of biodiversity and wildlife populations, disruption of natural landscape processes, degradation of air and water resources, loss of services provided by natural systems, increased costs for services to dispersed development, and decreased sense of community and life quality. The Elrich Amendments capture more properties for FCL review, encourage on-site forest retention, and have higher reforestation and afforestation requirements. These members believe that by increasing these requirements, the Elrich Amendments incentivize on-site retention of forest. This could slow the rate of forest loss and thereby lessen the ecological and social impacts of natural area reduction and fragmentation. These members believe the existing FCL does not adequately slow the rate of forest loss, and that Bill 37-07 does not provide any additional significant mechanisms to slow the rate of forest loss.

The Elrich Amendments attempt to significantly slow the rate of forest loss by broadening FCL trigger criteria (the list you are reading) and by modifying FCL tables “Forest Conservation Threshold and Required Afforestation as a Percentage of Net Tract Area” for Level 1 Reviews. These changes will subject more properties to the FCL review process. In these tables, Councilmember Elrich added a “Low Density Residential Area” to the Land Use Type and reorganized zoning categories throughout the Land Use Type column to accurately reflect land use in Montgomery County today. Councilmember Elrich raised the Conservation and Afforestation Thresholds. These changes result in more properties being captured for FCL review and higher reforestation and reforestation requirements. The Committee members who support this change believe that the result of these changes will be a slower rate of forest loss.

(2) a Department of Permitting Services’ Sediment Control Permit is necessary when there is proposed land disturbance of 5,000 square feet or greater. As is the current procedure, the Sediment Control Permit is the trigger for review.

(3) a person or entity is submitting a development or site plan. This review requirement is the same in the existing FCL and Bill 37-07.

(4) an activity threatens a Champion Tree or Specimen Tree. Councilmember Elrich believes that Champion Trees should trigger review of the FCL because they provide value to all Marylanders. Councilmember Elrich believes that Specimen Trees should be a trigger for review because of their significance to arboriculture, relationship to Champion Trees, and value to all Marylanders. (as evidenced by the public outpouring following the demise of the champion white oak in Poolesville)

(5) disturbance of any forest in a environmental buffer area or a Special Protection Area. Councilmember Elrich recognizes the need to protect forest in areas where streams, wetlands, and related natural features are of very high quality and where special measures must be applied to land development and to certain land uses in order to protect the high quality conditions of these natural features. Councilmember Elrich recognizes that it is imperative to protect our riparian buffers. Riparian buffers are the most efficient way to improve water quality in Montgomery County and the Chesapeake Bay. The Elrich Amendments place this review requirement under a Level 1 Review; the current FCL and Bill 37-07 require the less stringent Level 2 Review.

The requirements of a Level 1 Review for the applicant are:

- Submit a Natural Resource Inventory / Forest Stand Delineation, showing the environmental (soil, wetlands, etc.) conditions on the property and location of all trees
- Submit a Forest Conservation Plan showing what trees will/won’t be cut
- Perform mitigation as required in the law. This may include:
  - On site tree preservation
  - On-site replanting
  - Off-site replanting

- Fee-in-lieu

The purpose of these requirements is to slow the rate of forest loss in the county, incentivize on-site preservation of forest, and provide for off-site mitigation.

\*Note: The Elrich Amendments reads “lots of 10,000 square feet or greater”; however Councilmember Elrich has declared since the introduction of his Amendments to committee that he will use the measurement of 40,000 sq ft or greater.

The Elrich Amendments require a Level 2 Review by the Forest Conservation Law to be triggered when an activity will remove forest measuring less than 5,000 square feet on a lot 40,000\* square feet or greater.

The requirements of a Level 2 Review for the applicant are:

- Submit a Tree Inventory and Protection Plan showing what trees you will/won't cut and how you will protect retained trees
- There is NO replanting/mitigation required

These requirements prove that you qualify for this level of review and ensure insure that no forest beyond allowed amount will be cut or lost due to construction.

**† Reforestation Thresholds: Extended position statement in support of Bill 37-07 and Elrich Amendment**

In support of the position statement provided in the main body of this report, see also the two references cited below.

Article #1: Green Infrastructure Fact Sheet

The well-researched statements below supporting an increase in reforestation thresholds are excerpted from the “Green Infrastructure Fact Sheet” of the League of Women Voters of Montgomery County, September 2007 [available at <http://www.lwvmd.org/mont/fssept2002greeninfrastructure.html> ].

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Forest is valuable as a storm water management tool to prevent runoff and sedimentation. It costs about \$1 million per mile to restore streams that have become eroded. Trees and plant cover also improve water quality, acting as purifying filters. According to the National Tree Trust, one large tree can provide a day's supply of oxygen for up to four people and can lift up to 100 gallons of water out of the ground and discharge it into the air in one day. An acre of growing trees removes carbon dioxide equivalent to that produced by a car driven 26,000 miles. The trees also act as a carbon sink by removing the carbon from carbon dioxide and storing it as cellulose in the trunk while releasing oxygen into the air. Sound waves are absorbed by tree leaves and branches. Studies

suggest that belts of trees 100 feet wide and 45 feet high can cut the perception of highway noises in half.

*Natural Economics*

As a result of having to spend billions of dollars correcting past mistakes in land use, we have begun to recognize the monetary value of land to our future. A recent study shows that the tree canopy of the Willamette/Lower Columbia Region of Oregon provides hundreds of millions of dollars in environmental and economic benefits, such as reducing storm water runoff, energy usage, and air pollution. The “Regional Ecosystem Analysis for the Willamette/Lower Columbia Region of Northwestern Oregon and Southwestern Washington State,” conducted by the conservation group American Forests, found that the region’s trees are removing 178 million pounds of pollutants each year, a savings valued at \$419 million. Sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone, and particulate matter are among the pollutants that trees can absorb. This same tree cover is saving communities an estimated \$20.2 billion in storm water management costs (the amount it would cost to build a facility to handle that same quantity of storm water runoff).

In a recent sale of some 12,000 acres of Canaan Valley, WV, land to the U.S. Fish and Wildlife Service by Allegheny Energy Inc., the power company used a new approach that calculated the conservation value of the property. While the Fish and Wildlife Service paid the conventional fair market value, the power company will submit the additional conservation value to the IRS as a deductible donation. By including the worth of the land’s ecosystems, it came up with a figure that more than doubled traditional estimates. An independent appraiser calculated the “extra” value by researching what has been paid in recent years to mitigate various kinds of environmental damage. Included in the estimate was the value of some of the land as wetland banks and open space to mitigate destruction of habitat for rare species. But the estimate of the property’s value in terms of climate control, was the largest figure. At \$14 a ton for the carbon dioxide reductions (the gas causing greenhouse global warming) that could be gained by planting trees on the property and disposing of dead and dying trees that would release carbon dioxide as they rotted, the appraisal added \$7 million to the property’s value solely for carbon sequestration. It is doubtful that the appraiser’s values will be fully accepted by the IRS, but there is a valuable lesson here in the value of land. An economist with the nonprofit Environmental Defense organization said, “The reason ecosystems have been lost is because the services they provide really haven’t been valued in the marketplace.”

Article #2: Climate Change News from the Environmental and Energy Study Institute

*Climate Change News*  
*Environmental and Energy Study Institute*  
*Carol Werner, Executive Director*  
*June 20, 2008*

## Forests Impact Climate Change

In a report in the June 13 issue of *Science*, Gordon Bonan of the National Science Foundation's National Center for Atmospheric Research (NCAR) presents the current state of understanding how forests impact global climate. The report says there are roughly 42 million square kilometers of forest on Earth, covering almost a third of the land surface, and those environments play a key role in both mitigating and enhancing global warming. Bonan said, "Forests have been proposed as a possible solution [to mitigate global warming], so it is imperative that we understand fully how forests influence climate."

Bonan reports that the teeming life of forests, and the physical structures containing them, are in continuous flux with incoming solar energy, the atmosphere, the water cycle and the carbon cycle—in addition to the influences of human activities. The complex relationships both add and subtract from the equations that dictate the warming of the planet. Bonan said, "In the Amazon, tropical rainforests remove CO<sub>2</sub> from the atmosphere. This helps mitigate global warming by lowering greenhouse gas (GHG) concentrations in the atmosphere. These forests also pump moisture into the atmosphere through evapotranspiration. This cools climate and also helps to mitigate global warming.

We need better understanding of the many influences of forests on climate, both positive and negative feedbacks, and how these will change as climate changes. Then we can begin to identify and understand the potential of forests to mitigate global warming."

For more information see:

<http://www.sciencemag.org/cgi/content/short/320/5882/1444>

[http://www.terraviva.com/reports/If\\_A\\_Tree\\_Falls\\_In\\_The\\_Forest\\_And\\_No\\_One\\_Hears\\_It\\_Does\\_The\\_Climate\\_Change\\_999.html](http://www.terraviva.com/reports/If_A_Tree_Falls_In_The_Forest_And_No_One_Hears_It_Does_The_Climate_Change_999.html)

**† Reforestation Thresholds: Extended position statement in support of the existing FCL**

Those members of the Committee who do not support the Bill 37-07 change to the conservation thresholds instead prefer leaving the law in its current state. There are several reasons for leaving the forest conservation thresholds as they were originally established by the State of MD and Montgomery County.

First, the members of the Committee who support the existing thresholds believe the law is working as indicated by the statistics for the 15 years it has been in effect. These members believe the purpose and most appropriate use of the Forest Conservation Law is to simultaneously save priority forests and create new forests in sensitive, unforested

stream buffer areas. According to these members' calculations, 93% of forest on properties that trigger the FCL's reforestation requirements has been reforested or retained as forest cover (calculated based on data provided by Parks and Planning in its "15- Year Forest Conservation Activity in Montgomery County", MNCPPC, July 2008. Calculation made by FCAC member and not verified by The Planning Department). Countywide, there has been an approximately 13% increase in the stream buffer afforestation (Univ., of MD study) These members believe that the aforementioned statistics indicate that the existing forest conservation thresholds are working to provide for the maximum amount of forest retention while allowing the clearing of lower priority forests that contributes to the reforestation and enhancement of priority stream buffer areas. They believe current thresholds strike this delicate balance while still allowing the property to be developed under the zoning it was granted and in accordance with the community's Master Plan vision.

Secondly, Committee members who support the current thresholds believe it is unfair to pass new thresholds that will negatively affect only a few projects. There are currently approximately 28,100 residential units (5,508 single family detached homes, 4747 townhouses and 17,845 multifamily units) in the residential pipeline that have been approved by the Planning Department but have not been built. These units will come on line in the next 6 to 10 years based on market conditions. This combined back log will continue to grow over the next couple of years as the economy continues to struggle through the current down turn. All of these projects will be exempt from any changes to the Forest Conservation Law. The members of the Committee who support the existing thresholds believe they will represent the vast majority of development in Montgomery County for the next decade. Consequently, any new changes will affect relatively few projects that represent the few remaining parcels in the County that have a substantial amount of forest cover. These members believe that those few projects that will be affected by a new law with higher thresholds will be unfairly impacted by being the last ones to be developed.

Third, Committee members who support this position believe we are running out of land that is both forested and developable. In addition, they believe that most developable land has very little forest outside of buffer areas that can be considered for clearing or is altogether unforested. Due to the land shortage and other factors, much of the development that will take place in this county in the coming decades will be infill and redevelopment. These members believe that projects will provide a net gain in forest cover since they will be providing off site forest planting. They believe this can be seen already when reviewing the statistics for regulated projects in the year 2007, in which there were 184 more acres of reforestation and forest retention than there were acres of existing forest.

Fourth, these members believe that increasing the thresholds is without peer-reviewed scientific basis and will adversely impact the ability to achieve other desirable community policies. In fact, these members believe there is no logical reason provided thus far that would warrant a radical change to a law that has been in place for 15 years

and has been proven that it is meeting its intended purpose. As stated by Planning Board staff at the Planning Board, the basis for these proposed changes is in response to recommendations by the C&O canal taskforce, a group established in response to illegal forest clearing that occurred along the Potomac River. Increasing the threshold by any amount would not have changed what occurred along the C&O canal. Testimony presented to the Planning Board by staff, affirmatively indicates a reduction in moderately priced, work force and market rate housing and mixed use density of approximately 10-20%. As a result of a 5 percentage point (25-33% actual increase), the impact is much greater for properties that would fall under Councilman Elrich's proposed low-density residential land use category.

For the reasons outlined above, those members who support the existing thresholds believe it is unnecessary to change the thresholds, particularly at this point in time. In fact these members believe a change at this stage of the county's growth cycle could have a big impact on a few land owners and little impact on the county as a whole.

**§ Mitigation Ratios & Fee-in-Lieu issues: Extended position statement in support of Bill 37-07**

Example Projects provided by Committee members who support Bill 37-07

Below is a summary, with additions by Committee members who support this position, of the example projects were provided by MNCPPC staff in their staff report dated September 17, 2007. In addition to the MNCPPC data, the Committee members who support Bill 37-07 have independently added information pertaining to increasing the fee-in-lieu from \$.90 to \$2.00, although almost all of the examples do not qualify for the Fee-in-lieu payment since they have more than ½ acre of planting required. In addition, these members have independently calculated the increases in the planting requirements and fee-in-lieu costs with the percentage increase for each. They have also added the number of lots they believe would be lost at an estimated cost of \$250,000 per lot, which they believe is a conservative estimate because 25 acre lots would be more valuable and smaller lots would be less valuable. Finally, the cost of the planting is shown at \$.90 per square foot based on information and input provided to these Committee members by MNCPPC staff (information provided outside Committee discussions), and based on input from Committee members that actually are contracted to do the planting.

*Example #1:*

This example is for a 21.1 acre property in the RE2 zone, which allows 10 residential lots and has 18.6 acres of existing forest. Under the current law the reforestation planting is .85 acres with a planting cost (at \$.90/acre) of \$33,323 (fee-in-lieu not permitted). Under Bill 37-07, the threshold is increased so the planting requirement goes up to 1.91 acres (125% increase). With the increase in the planting requirement, the planting cost goes up to \$74,880 (225% increase).

Under the Elrich amendments, the thresholds are increased numerically so the planting requirement goes up to 7.44 acres (775% increase). The planting cost is \$291,678 (775% increase). These increased costs are also a result of changes to the mitigation ratios, and the

increase in the fee-in-lieu. The members of the Committee who support Bill 37-07 believe is also reasonable to assume that the Planning Board will not allow clearing below the threshold since the ultimate goal is to allow clearing to the Break Even Point, which is much higher than the threshold. In order to meet the threshold level of forest retention, these members believe that the property owner would lose 1 lot at a cost of \$250,000 in addition to the above increase in the planting cost.

*Example #2:*

This example is for a 49.65-acre property zoned RE2, which allows for 24 residential lots, and has 14.01 acres of existing forest. Under the current law the reforestation planting is 0 so there is no cost or fee-in-lieu. Under Bill 37-07, the threshold is increased so the planting requirement goes up to 1.8 acres and with the fee increase the fee-in-lieu cost would be \$156,816. The planting cost would go from \$0 to \$70,567 (at \$0.90/acre).

Under the Elrich amendments the threshold increases further, which would not cause a loss of lots since the existing forest would be lower than the higher conservation thresholds and higher than the afforestation thresholds, meaning no further mitigation.

*Example #3:*

This example is for a 377.47-acre property zoned RDT, which allows for 15 residential lots and has 168.6 acres of existing forest. Under the current law the reforestation planting is 9.04 acres with a planting cost (at \$0.90/acre) of \$354,404. The example shows no impact from Bill 37-07 or the Elrich amendments other than the increase in the fee-in-lieu cost, which goes from \$354,404 to \$787,565 (122% increase) for the 9.04 acres of planting required.

*Example #4:*

This example is a 12.21-acre property zoned OM, which allows for 787,801 square feet of commercial-industrial building area and has 7.85 acres of existing forest. Under the current law the reforestation planting is 1.01 acres with a planting cost (at \$0.90/acre) of \$39,596. Under Bill 37-07 the threshold increases raising the planting requirement to 1.78 acres (76% increase) at a cost of \$69,783. The Fee-in-lieu is not available since the planting is over ½ acre. In order to meet the higher conservation threshold, Committee members who support Bill 37-07 believe the owner would lose 13,721 square feet of building area at a cost of \$343,035. These members therefore believe the cumulative impact would be a cost increase of \$412,818 (1043% increase).

Under the Elrich amendments the planting requirement goes up to 3.13 (209% increase) which would produce a planting cost of \$122,709 (210% increase). Committee members who support Bill 37-07 believe that number would rise to \$465,744 if the cost of lost building area is considered.

*Example #5:*

This example is a 34.42-acre property zoned R200 TDR3, which allows for 103 lots and has 27.09 acres of existing forest. Under the current law the reforestation planting is 4.86 acres with a planting cost (at \$0.90/acre) of \$190,531. In addition, the note at the bottom of the MNCPPC chart explains *“The amount of forest saved under this example changes because the application must meet the conservation threshold on site. That is, this property is in a single family zone that is using an optional method of development. When an application must meet the conservation or afforestation threshold on site, the physical amount of space available to locate residential units is reduced. This example does not assume a change in unit types from what is proposed.”*

Under Bill 37-07 the threshold increases to 8.61 (25% increase) and the planting requirement actually goes down by .24 acres (5% reduction) in order to meet the conservation threshold on site. Committee members who support Bill 37-07 believe there would be a loss of 5 lots in order to meet the threshold on site, at a cost of \$1,177,500. They therefore believe the cumulative cost (assuming fee-in-lieu was used) would be \$1,389,463, an increase of 729% over the current cost.

The Elrich amendment has a planting requirement of 8.38 acres (72% increase), which would result in a planting cost (at \$0.90/acre) of \$328,530 (72% increase). Committee members who support Bill 37-07 believe it would cause a loss of 10 lots at a cost of \$2,467,500 (assuming \$250,000 per lot) in addition to the cost presented above. These members therefore believe the cumulative cost would be over \$2.7 million.

*Example #6:*

This example is a 12.8-acre property zoned R90 TDR6, which allows for 76 lots and has 9.42 acres of existing forest. Under the current law the reforestation planting is 2.44 acres with a fee-in-lieu cost of \$95,461. Under Bill 37-07 the threshold goes up to 8.61 acres (25%) but since the threshold must be met on site, the planting requirement actually goes down to 1.56 acres at a cost of \$61,158 (36% reduction). Committee members who support Bill 37-07 believe there would be a loss of 6 lots at a cost of \$1,500,000 (assuming \$250,000 per lot), approximately \$21,758 per unit.

Under the Elrich amendments, the threshold goes up to 10.33 acres (50% increase) and the planting requirement goes up to 2.79 acres. The planting cost would be \$109,379 (15% increase). Committee members who support Bill 37-07 believe ten lots would be lost at a cost of \$2.46 million (assuming \$250,000 per lot). These members therefore believe the cumulative cost would be \$38,943 per unit.

*Example #7:*

This is a recorded single lot on 1.66 acres and is completely forested. Under the current law the planting requirement would be .42 acres, a planting cost of \$16,465. The conservation threshold is .42 acres. Under Bill 37-07 the threshold will go up to .5 acre (19% increase) which would require .57 acres of planting at a cost (at \$0.90/sq ft) of \$22,346 (36% increase).

Under the Elrich amendments the thresholds do not change but the planting requirement increases due to the change in the ratios. The planting requirement goes up to .86 acres (104% increase). The planting cost for this would be \$33,715 (105% increase).